Planning & Automating Quality Assurance for Enterprise Data Warehousing Projects

Master six dimensions of QA and learn test automation in this two-day seminar.

Learn how agile quality assurance can instill speed, integrity, and optimal practices in every member of your business intelligence and data analytics project teams

When properly planned and executed, the quality assurance function of an enterprise data management program can drive requirements, control design, accelerate programming, and ensure customer satisfaction—all while driving defects to zero. This seminar will thoroughly instruct attendees through agile system validation theory, QA program design, and automated test implementation for business intelligence and data warehousing programs.

Drawing heavily on the quality techniques that enable agile development teams to deliver three times faster than traditional projects, this workshop illustrates how progressive quality planning can unambiguously express and measure the “definition of done” for every role in the software life cycle—from business analyst and module designer to system tester and implementation planner. Attendees will translate the layered QA plan they derive in class into operating validations within an automated test engine, so that they will return to work fully ready to implement the theory they learn with us.

This seminar speaks to single practitioners as well as a project’s entire leadership group, introducing them to the power of test-led development and nightly full regression testing. Your team will return from this seminar understanding how to apply validation scripts at every level of requirements—business, solution, technical, and acceptance. They will also be prepared to convert those tests into daily metrics by which the function of every team member can be measured and guided.

Whether you send one developer or an entire project team, this seminar will illustrate how to:

- plan all six dimensions of a data management quality assurance function
- write tests for all requirements, from business and solution to technical and acceptance
- share test authorship so that all teammates contribute and control their areas of expertise
- review, select, and compile validation cases into a minimal & comprehensive test suite
- automate the large majority of those test cases into a nightly, full regression testing function
- derive daily metrics from the test engine, alerting team and management to defects
- spot where the development team is struggling and set attainable goals for improvement

If your feel that your data warehousing, business intelligence, or big data commitments are beginning to exceed the time and funding you’ve been allowed, then you need to equip your team with the technology and know-how offered in this seminar. Starting with this training, you can use iterative QA to give your team the speed of agile data warehousing.

Mr. Hughes’ book available today at store.elsevier.com
Use discount code COMP315 at checkout for 30% off and free shipping worldwide
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A systematic walk through of how quality assurance can support and accelerate the major disciplines comprising data analytics: requirements, feature sequencing, design, incremental programming, continuous testing, and measurable benefits realization

Instructor: Ralph Hughes

Ralph Hughes, MA PMP CSM, serves as Chief Systems Architect for Ceregenics, a data management consulting firm. Author of three books on agile data analytics, he is an authority on the methods, tools, and modeling techniques that enable incremental design and rapid delivery of enterprise business intelligence systems. He has served as developer, architect, and project manager on numerous BI programs for Fortune 500 companies in aerospace, telecom, insurance, health care, and pharmaceuticals. A frequent keynote speaker and instructor at business analytics conferences, he provides architectural reviews and program roadmaps for data warehousing departments the world over. A certified Scrum Master and Project Management Professional, he holds BA and MA degrees from Stanford University and is a veteran instructor with The Data Warehousing Institute. In his 30 years of practice, Ralph has trained, mentored, or coached over 2,500 people worldwide in the art of rapid application development.

Ceregenics is proud to use Zuzena’s ACIT test & transform engine to illustrate the concepts taught in this course. Zuzena’s data-vault style, reusable data transformation modules eliminate most of the coding for your EDW integration layer development. Zuzena is inexpensive and includes a repository-based execution engine for testing that can:

- accept test scripts directly or call external SQL and ETL modules
- categorize the test cases by aspects such as project, subject area, module, architectural layer, error class, and developer
- widely re-use test cases by modifying only the calling parameters
- execute full or selective regression test suites nightly
- generate graphical and tabular reports of passing and failed test that teams can summarize by many, user-defined categories

With Zuzena’s data transform modules and test automation features, EDW development teams can rapidly populate and validate an entire EDW integration layer by setting a few parameters and re-using a handful of SQL commands. Cloud-based demonstrations available at info@zuzena.com

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Course offered by Ceregenics, Inc.
999 18th Street Suite 3000, Denver, Colorado, 80202
info@ceregenics.com (303) 274-9101

Visit our YouTube videos for some background on the technology covered in this class:
- How Fast Can Agile Data Teams Deliver? ................. youtu.be/f5m1rNlr4zE
- Pros & Cons of Hyper Normalized Data Models ............... youtu.be/3Q0SOeN8vcY
- Faster, Business Analytics with Reusable Data Transforms ........ youtu.be/lNC8R15Jyv4

Register at EventBrite.com: search for “Planning & Automating” in Golden, CO or go to http://bit.ly/2lrBUhk
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Course Syllabus

Intro
The EDW Quality Challenge
Progressive QA Frameworks
Why Test? Because...
...Defects Accumulate
...Fast Methods Are Light On Ceremonies
...Integration Spans The Specification Pipeline
...Testing Makes Progress Visible To Everyone
Quality & Requirements: Photomultiplier Effect

What? – Types Of Tests We Should Run
Should We Test Everything?
The Six Dimensions To Quality
  1. Planning Dimension
  2. System Dimension
  3. Functional Dimension
  4. Polarity Dimension
  5. Time Frame Dimension
  6. Perspective Dimension
The Full Menu Of Test Types
The 2x2 QA Planning Framework
EDW’s Hierarchy Of Conceptual Risk
Testing Business Concepts
Standard Tests For Application Coding
DW Specific Test Types

Who? – Responsibilities By Team Role
Waterfall QA Staffing
Agile QA Staffing
Adapting Roles For DW/BI
When System Testers Must Lead
Classic V-Model Suggests Specific Duties
Roles By Validation Focus
QA Via “One-Up, One-Down” Validation
How Many Testers Are Needed?

When? – Test Types Vary Along Dev Life Cycle
Forward-Looking QA
Pipelined Delivery Technique
Sequencing QA Work
QA Techniques To Choose From

Where? – Testing Varies With Environment
QA Techniques To Choose From
Testing Techniques By Location
Architectural Layers & Test Data Sets
Actual & Expected Result Repositories
Incremental UAT

How? – Managing High Test Case Volumes
Test-Led Development Pattern
“Test-Led Development” At All Levels
Data-Based Testing Scenarios
Tracking Defects
Managing Defects
Solving “Data Churn”
Automated Regression / Integration Testing
Nominal (“Happy Path”)
Dirty Data (Human-Visible Syntax Flaws)
Corrupted Data (Machine-Visible Syntax Flaws)
Missing Rows / Tables
Incoherent Data (Skipped Or Mis-sequenced Files)
Duplicate Data (E.G., Overlap Between To Extracts)
End-Of-Period (E.G., Month, Quarter, Year)
Archiving (Purging Of Data That’s Too Old)
Catch-Up (Usually Three Days Per Run Day)
Restart (Test Operation Instructions)
High- Or Full-Volume (Performance And Rare Errors)
Automated Testing: Test Case Cycle
Automated Testing: Scenario Cycle
Agile Test Reporting Dashboards
Strategy For Complex Warehouse Testing

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